Before the
Federal Communications Commission
Washington D.C. 20554

In the Matter of	)	
	)	
Redevelopment of Spectrum to	)	ET Docket No. 92-9
Encourage Innovation in the	)	
Use of New Telecommunications	)	
Technologies	)	

To: The Commission

Reply Comments
of the
Wireless Information Networks Forum

The Wireless Information Networks Forum ("WINForum") is an alliance of manufacturing, user and research community members who are working together to obtain, and effectively employ, radio spectrum for user-provided, voice and data personal communications services (User-PCS). WINForum recommends that User-PCS be developed in the Emerging Technologies bands at 2 GHz, as proposed in the above-referenced Notice of Proposed Rulemaking.

The allocation to User-PCS must be primary and exclusive, without preclusive access to any portion of the allocation by any party. It should incorporate equipment authorization rules that provide for equitable sharing of the User-PCS spectrum resource.

There is no shortage in the record of this proceeding of worthwhile solutions and approaches to implementing Emerging Technologies bands.

The record shows substantial support for spectrum allocation to Emerging Technologies, including allocation to User-PCS. American Telephone and Telegraph Co. observed that

> "In order to bring high quality, non-licensed, voice and data products to home, office and factory environments, manufacturers and consumers need an allocation of clear spectrum with rules that establish and enforce 'good neighbor' relationships among competing products."[1]

[1]Comments of AT&T, ET Docket 92-9, p. 15.

The Local Area Network Standards Committee 802 of the Institute of Electrical and Electronics Engineers urged the Commission to allocate spectrum from the 2 GHz band to wireless local-area networks (LANs), and to clear it of existing users over a two-year period in order to foster the long-overdue development of new wireless LAN technologies.[2]

Motorola recommended that the FCC designate spectrum for both private and public PCS alternatives,

> "such as low milliwatt power wireless office, RLAN [radio local-area network], and consumer digital applications, in addition to larger cell exterior coverage public and private system offerings."[3]

Hewlett-Packard Co. said it is

> "committed to a future User-PCS environment that fully integrates voice and data."

Allocation of spectrum to User-PCS with appropriate technical rules will, it said,

> "allow the creation of whole new categories of communicating/ computing devices and the supporting network infrastructure products, creating a whole new industry."[4]

McCaw Cellular Communications Inc. noted that wireless PBX systems, enhanced residential cordless telephone services and wireless data networks have generated a high degree of interest by both consumers and manufacturers. It described these as a

> "good example of services that would be widely used while requiring only limited spectrum resources."

McCaw added that any exclusive allocation necessary for these applications

> "could be accommodated in a lightly used portion of the spectrum."[5]

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[2]Comments of IEEE 802 Local Area Network Standards Committee, ET Docket 92-9, p. 10.

[3]Motorola "supports efforts by industry groups such as the WINForum to develop a solution" to the issue of primary spectrum allocation to nonlicensed user-provided services. Comments of Motorola Inc., ET Docket 92-9, p. 18.

[4]Comments of Hewlett-Packard Co., ET Docket 92-9, p. 3.

[5]Comments of McCaw Cellular Communications Inc., ET Docket 92-9, p.22-23.

Opponents, however, would withhold these valuable Emerging Technologies from the American public. Some object to the nonlicensed nature of User-PCS. They believe that existing users would be unable to identify interference sources or to obtain reimbursement for relocation costs from nonlicensed users.

It cannot be assumed that nonlicensed systems would necessarily operate in spectrum occupied by existing users. In fact, a dedicated User-PCS band should be free of non-conforming operations. The FCC would not authorize proposed products that could interfere with the fixed service. In any case, a universal ID could provide readily available means of identifying a User-PCS transmitter.[6]

Nor could User-PCS users be held responsible for relocating existing microwave systems. To the extent relocation of existing users is necessary, it should take place before User-PCS transmissions commence because of the need for a uniform, nationwide primary and exclusive allocation for User-PCS.

The actual costs, timetable, and extent of relocation to other bands required to implement Emerging Technologies should consider:

- Studies reveal substantial unused spectrum at 2 GHz;[7]
- Carrier-provided PCS may require little, and in some markets, no relocation;[8]
- Retuning of fixed service radios within the band can reduce transition costs,[9] protecting important public safety needs while creating 'open space' for new users of the band;[10]
- Upgrades to existing fixed systems can yield significant spectrum gains;[11]

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[6]Petition for Rulemaking of Apple Computer, Inc., RM-7618, p. 27.

[7]Testimony of Wayne N. Schelle, American Personal Communications, before the Senate Communications Subcommittee, June 3, 1992, p. 4.

[8]Id.; see also Southwestern Bell Corp., ET Docket 92-9, p. 4.

[9]Petition for Rulemaking of Apple Computer, Inc., RM-7618, p. 22.

[10]Comments of the Public Safety Microwave Committee, ET Docket 92-9, p. 4.

[11]Comments of Pacific Telesis Group, ET Docket 92-9, p. 9-10.

- Government spectrum may accommodate some private systems;[12] and

- the Commission's PCS Notice of Proposed Rulemaking "will make it possible to determine the amount and location of 2 GHz frequencies that could be used immediately, without interference to or from the existing fixed users."[13]

The record also demonstrates the inability of ISM spectrum to host User-PCS.[14] As the North American Telecommunications Association commented, "(T)he potential market will not be uncovered, and the productivity and efficiency gains from wireless office systems will not be realized, unless the Commission provides a more reliable frequency allocation than the existing cordless telephone frequencies and other 'secondary use' frequencies available for unlicensed use under Part 15 of the FCC rules."[15]. Manufacturers with first-hand experience in Part 15 have concluded that:

- The market for these products will be greatly curtailed unless the FCC creates an environment where systems can be deployed without significant risk of interference;[16]

- The ISM bands will necessarily become less and less serviceable for large-scale ubiquitously available radio services over time; [17] and

- A User-PCS band will signal that it is safe for users and developers to invest at a much faster pace.[18]

Spectrum allocation to Emerging Technologies is an appropriate international trend. It will offer consumers, businesses and institutions untethered, self-provided voice and data communications – in services, manufacturing, transportation, government, education, health care, and virtually every field revolutionized by telephone and computer networks.

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[12]Comments of the National Telecommunications and Information Administration, ET Docket 92-9, p. 20.

[13]ET Docket 92-9, at 29.

[14]Reply Comments of Apple Computer, Inc., RM-7618, p. 10-12.

[15]Comments of the North American Telecommunications Association, ET Docket 92-9, p. 4.

[16]Comments of SpectraLink Corp., ET Docket 92-9, p. 3.

[17]Comments of NCR Corp., RM-7618, at 5.

[18]Comments of California Microwave Inc., ET Docket 92-9, p. 3.

Whereas, the foregoing considered, WINForum urges the Commission to implement Emerging Technologies bands.

Respectfully submitted,
The Wireless Information Networks Forum

By: Benn Kobb

Benn Kobb
Coordinator

1155 Connecticut Avenue N.W. Ste. 500
Washington, D.C. 20036
Telephone: 202/429-6512
Facsimile: 202/452-8654
Internet: winforum@access.digex.com

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